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O'Laughlin & Paris LLP

Attorneys at Law

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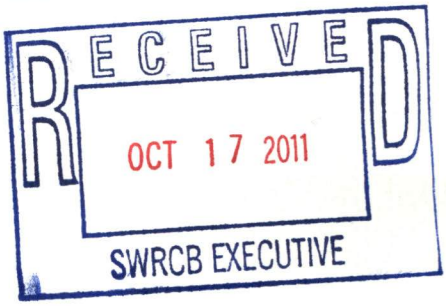

October 12, 2011

Charlie Hoppin
Tam Doduc
Frances Spivy-Weber
State Water Resources Control Board
1001 I Street
PO Box 2815
Sacramento, CA 95812-2815

Re: Use of Fish Doubling Goal as Basis for Narrative Standard Proposed as Part of the Amendments to the San Joaquin River Flow Objectives is Improper

Dear Members of the Board:

The State Water Resources Control Board ("SWRCB") stated in its April 1, 2011 Revised Notice of Preparation and Notice of Additional Scoping Meeting that it was considering adoption of flow objectives designed to meet a narrative standard intended to double the natural production of salmon. Specifically, the proposed narrative standard provided:

> "flow conditions shall be maintained, together with other reasonably controllable measures in the San Joaquin River watershed, sufficient to support a doubling of natural production of Chinook salmon from the average production of 1967-1991, consistent with the provisions of State and federal law."

For a host of reasons, discussed in detail below, the SWRCB's intended use of the doubling goal as the basis for the proposed narrative standard is improper and the SWRCB should commission additional workshops to develop and explore proper and achievable goals for any amendments to the San Joaquin River flow objectives.

The Doubling Goal Does Not Apply to the San Joaquin River Basin or to Individual Streams in the San Joaquin River Basin.

The proposed narrative standard indicates that it is consistent with the provisions of the doubling goals found in both State and federal law. However, this characterization is not accurate. As proposed, the

117 Meyers St., Suite 110
Post Office Box 9259
Chico, California 95927-9259

530.899.9755 tel
530.899.1367 fax

narrative standard would apply to the San Joaquin River between the confluence of the Merced River and Vernalis, and in each of the three major tributaries to the San Joaquin River. (April 1, 2011 Notice, Attachment 2, Table 3). Neither the State nor federal law concerning the doubling of the natural production of anadromous fish is so limited.

The State law concerning the doubling of anadromous fish applies State-wide. (*See, e.g.*, Fish & Game Code § 6912 [term "program" defined as "the program for protecting and increasing the naturally spawning salmon and steelhead trout **of the state**...."]; *see also* Fish & Game Code § 6922 [requiring one of the elements of the "program" to be the identification alternatives to manmade factors "which cause the loss of juvenile and adult fish **in California's stream system**."])(emphasis added). There is nothing in the State law that requires the SWRCB to attempt to double the natural production of salmon and steelhead in a particular stream or basin while leaving out other streams or portions of a basin, particularly where the anadromous fish utilize these streams.[1] Nor is there any analysis of whether this is achievable.

Similarly, the federal Central Valley Project Improvement Act, P.L. 102-575 ("CVPIA") does not apply to a particular stream or basin. It applies to "anadromous fish in the Central Valley rivers and streams...." Indeed, the United States Fish and Wildlife Service ("USFWS") defines "Central Valley rivers and streams" to mean "all rivers, streams, creeks, sloughs and other watercourses, regardless of volume and frequency of flow" that drain into the Sacramento River Basin, San Joaquin River Basin and Delta. (*see* http://www.fws.gov/stockton/afrp/definitions.cfm?code=4). To be sure, the USFWS has attempted to implement the mandate of the CVPIA by entering into partnerships on specific and individual watersheds and streams, but such approach is not required by law. Moreover, the law does not consider the doubling of fish on any particular stream as satisfaction of the overall mandate, nor does it require that each stream at least double its natural production when compared to the baseline. If the total amount of anadromous fish in the Central Valley can be doubled, it will not matter if one stream has achieved more or less than a 100% increase when compared to the baseline. The idea behind the legislation is to double the number of Central Valley anadromous fish, which leaves flexibility to the agencies to focus their attention and efforts in those locales where the greatest restoration can occur.[2]

This is not to say that the San Joaquin River Basin and the three major tributaries have no role to play in the effort to double the natural production of anadromous fish. Theoretically, specific factual findings could support changes to the timing, magnitude and volume of water of any or all of the three tributaries and the main stem to increase the natural production of anadromous fish. However, the SWRCB has not made any such findings, but has instead attempted to justify the narrative standard as being required of State and federal law. Such attempted justification is inappropriate and, in the absence of any specific factual findings indicating that the increase of flows would be successful in

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[1] The Department of Fish and Game ("DFG") was directed to develop a program, which included identifying streams where natural production of salmon and steelhead could be increased through streamflow operations. (Fish & Game Code § 6922(b)). There is no indication that the SWRCB's narrative standard is in response to any such identification by DFG.

[2] Table 1 of the AFRP Final Restoration Plan identifies the number of fish needed to meet the doubling goal. It does not identify any particular stream or watercourse, nor does it allocate or assign a particular number to a particular stream. (*see* Table 1, AFRP Final Restoration Plan, found here: http://www.fws.gov/stockton/afrp/restplan_final.cfm#3a).

increasing the fish population, the use of the doubling goal established in State and federal law in the proposed amendments to the San Joaquin Basin flow objectives must be reconsidered.

Even if the SWRCB Can Use the Doubling Goal as a Basis for the Proposed Amendments to the San Joaquin River Flow Objectives, Facts and Logic Indicate that Such Approach is Inappropriate.

A. Ocean Harvest Protocols Will Prevent the Doubling of Anadromous Fish Regardless of the SWRCB's Efforts.

Although the legislative policy cited by the SWRCB applies to all anadromous fish in California (*see* Fish & Game Code § 6902 [salmon and steelhead]; *see also* CVPIA P.L. 102-275, § 34069b)(1), October 30, 1992; 106 Stat. 4600 [anadromous fish]), the time of year associated with the SWRCB's proposed narrative standard is identified as "February through June," which is relevant only to the life history of Central Valley Fall Run Chinook Salmon ("CVFRCS"). Recent information has come to light demonstrating that any effort by the SWRCB to double the natural production of CVFRCS in the San Joaquin River Basin will be ineffective and doomed to failure due to the commercial fishery management protocols affecting the number of CVFRCS that are harvested in the ocean. The SWRCB needs to reconsider the proposed amendments to San Joaquin River flow objectives in light of the ocean harvest protocols.

At the SWRCB's June 6, 2011 scoping workshop, the National Marine Fisheries Service ("NMFS") made a presentation which, among other things, identified the fishery conservation and management considerations under the federal Magnuson-Stevens Act, 16 U.S.C. §§ 1801 *et seq.* ("MSA"), as part of the regulatory framework affecting salmonids in the San Joaquin River Basin. (*See* NMFS' June 6, 2011 presentation, slide #2, found at http://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/bay_delta_plan/water_quality_control_planning/docs/060611wrkshp/nmfs.pdf). Due to the obvious link between the ocean harvest protocols developed under the MSA and the health and well-being of salmon populations in the San Joaquin River Basin, the San Joaquin River Group Authority ("SJRGA") sued NMFS, the National Oceanic and Atmospheric Administration, the United States Department of Commerce, and the Pacific Fishery Management Council ("PFMC") (collectively "the United States") regarding NMFS' adoption of the 2011 harvest of Sacramento River fall-run Chinook salmon ("SRFC").[3] Given the dire condition of CVFRCS as expressed to you by NMFS, USFWS, the DFG, and the non-governmental organizations ("NGOs"), and as evidenced by the population crash in 2007 resulting in the closure of the ocean fishery in 2008 and 2009, the SJRGA was greatly concerned about the impact that overfishing was having on CVFRCS. The SJRGA concluded that because SRFC, which are classified by NMFS as a "species of concern" (and more recently "reclassified" as a candidate species for listing as threatened or endangered) under the Endangered Species Act, 16 U.S.C. §§ 1531 *et seq.* ("ESA") are in peril, preventing the loss of 50-65 percent of the SRFC adult population due to ocean harvest would be both wise and in concert with the State's goal of doubling the production of salmon.

[3] SRFC include all salmon runs in the Central Valley.

In response to the SJRGA's suit, the United States has made three unexpected yet highly revealing arguments. First, the United States argued that despite the 2007 population crash and the designation of the SRFC as a "species of concern" under the ESA, the SRFC population is in good condition. According to the United States,

> "[d]espite [SJRGA's] attempt to paint a dire picture, the record shows that ***SRFC are not in decline***." (United States' brief, p.1). Second, the United States argued that the current population objectives for SRFC under the MSA, which call for natural and hatchery spawners of between 122,000 and 180,000 each year, are sufficient to enable the ocean harvest of 50-65% of SRFC. (United States' brief, p. 4). Third, the United States addressed the substance of the SJRGA's claim that the current ocean harvest protocols will result in a violation of the doubling goal by disingenuously arguing that the SWRCB's proposed amendments to the San Joaquin River flow objectives have nothing to do with the doubling of salmon. Indeed, according to the United States, "the SWRCB ha[s] already determined that the flow objectives will be structured around a proportion of natural flow, not achieving a certain number of returning Chinook. The Court should not credit [SJRGA's] argument that the 2011 fishing regulations somehow affect, let alone violate, whatever requirements will be implemented to achieve the salmon production doubling goal." (United States' brief, p. 18 [internal citation and footnote omitted]).

The significance of these three arguments is that irrespective of the doubling goal, or any efforts to implement it, NMFS' management goal is to cap the number of returning spawners at no more than 180,000 in any given year. Assuming that NMFS adheres to this position, it will be **impossible** to achieve the doubling goal.

As part of its submittal to the SWRCB on February 8, 2011, the Department of Interior ("DOI") provided what it termed a "lifecycle approach to developing survival goals." (*See* DOI's February 8, 2001 comments, p. 16-18, and 49-50). Such approach indicated that a cohort replacement rate of 1.77 will double the starting population size in six years. (Id., p. 16). Since 1996, the San Joaquin River Basin has been responsible for 4.8% of the escapement of all CVFRCS. (PFMC's "*Review of 2010 Ocean Salmon Fisheries*" dated February 2011, Table B-1, p. 191). The best single year was 2000, in which the San Joaquin River Basin was responsible for 10 percent of the escapement of CVFRCS. (Id.). If San Joaquin River Basin escapement is assumed to be 10 percent each year, and total escapement is limited by NMFS' ocean harvest protocols at 180,000 fish, only 18,000 fish will return to the San Joaquin River Basin to spawn. At this number, even assuming the cohort replacement rate is 1.77 (and all other elements depicted in the first row of DOI's lifecycle approach are the same, including 250 emigrants per spawner which DOI considers "achievable" based on past estimates of production), the total San Joaquin River Basin production will never double, as total production will be capped at 31,860 fish (18,000 X 1.77=31,860). Since the doubling goal for the San Joaquin River Basin is approximately 78,000 fish (*see* DOI, p. 16), the ocean harvest protocols which cap returning spawners at 180,000 per year will make it **impossible** to double San Joaquin River Basin FRCS.

B. Given the Small Contribution of the San Joaquin River Basin to the Total Population of CVFRCS, It Makes Little Sense to Focus Restoration Efforts in the San Joaquin River Basin.

As noted above, even if all of DOI's goals are met concerning the number of eggs per adult, the rate of egg to fry survival, in-river juvenile survival, the number of emigrants per adult, and the rate of through-Delta survival, provided the cap remains at 180,000[4] returning spawners each year, the San Joaquin River Basin population can never double. Certainly, restoration efforts can possibly raise the San Joaquin River Basin population without doubling it, and such increase may have merit. However, information indicates that the SWRCB will have a far greater likelihood of success if it focuses its efforts on the Sacramento River Basin.

For example, while DOI indicates that getting 250 emigrants per spawner is achievable, the data show that the average number of emigrants per spawner in the Stanislaus, Tuolumne and Merced Rivers has been 166, 46 and 10 respectively, and neither the Tuolumne or Merced Rivers have achieved as many as 250 in any recent single year. (DOI, Table 4.2, p. 18). Further, the scenario depicted in DOI's first row of Table 4.1 assumes a through-Delta survival rate of .5, yet it admits that "survival through the Delta has not been greater than 0.20 since 2001...." (DOI, p. 19). At this point, it is **impossible** to know what flows or other actions will be needed to increase the number of emigrants per spawner, or to improve the rate of survival through the Delta. However, because the San Joaquin River Basin's contribution is so small to begin with – on average only about 5 percent - it makes little sense for the SWRCB to focus its effort on improving these factors.

Logic and mathematics dictate that if the SWRCB is interested in doubling the natural production of anadromous fish, it must focus its efforts in the Sacramento River Basin where 90 percent of the fish are located. Again, assuming 180,000 returning spawners, 162,000 (90%) would return to the Sacramento River Basin. Actions that improve this number by 1 percent would net an additional 16,200 fish. As noted above, doubling the San Joaquin River Basin would, at best, net an increase of 13,860 fish.

Moreover, the State and federal doubling goals apply to winter-run and spring-run Chinook salmon, neither of which is currently found in the San Joaquin River Basin, but both of which are found in the Sacramento River Basin. (PCFMC, *Pacific Salmon Fishery Management Plan* (1999), p. 3-8). Again, in the absence of very specific factual findings to the contrary, simple logic indicates that the SWRCB can obtain the greatest benefit to all anadromous fish species by focusing its efforts in the Sacramento River Basin.

Absent very specific, detailed factual findings indicating that the water and dollar costs to improve Sacramento River Basin conditions dramatically exceed the water and dollar costs to achieve a similar improvement in the San Joaquin River Basin, the SWRCB should reconsider whether it is reasonable and prudent to impose new flow conditions designed to double the natural production of

[4] This is actually the ceiling, and the actual number is often far less. For example, the number of returning spawners in 2007, 2008 and 2009 was 87,940, 64,456, and 39,530 respectively. With low numbers such as these, which occurred despite the "management" by NMFS and the PFMC, the doubling goal will never be reached as there are not enough improvements in the rivers and the Delta to offset the low overall number of returning spawners.

anadromous fish in the San Joaquin River Basin. This is particularly so where any such effort will have little chance of success overall, will likely be of little comparative benefit, and will be grossly unfair and burdensome to the San Joaquin River Basin water users.

C. The State and Federal Doubling Goal Focuses on Natural Production, But the Evidence Shows that the San Joaquin River System is Dominated By Hatchery Fish.

Both State (Fish & Game Code § 6902(a)) and federal law (CVPIA Section 3406(b)(1)) are focused on doubling the "natural" production of anadromous fish. Use of such term means that hatchery fish are not to be counted towards or used to achieve the doubling goal. Regardless of the wisdom of eliminating hatchery fish from the calculation, the data shows that the San Joaquin River Basin in particular is dominated by hatchery fish and increasing flows, in the absence of any plan, program or effort to reduce or eliminate hatchery fish, will not improve the natural production of anadromous fish.

Beginning in the spring of 2007, DFG began the Constant Fractional Marking ("CFM") program throughout the Central Valley to determine, among other things, the proportions of hatchery and natural origin returners. Pursuant to the CFM program, a minimum of 25 percent of hatchery releases of fall-run Chinook salmon are (1) marked by removal of the adipose fin, and (2) are tagged with an internal Coded Wire Tag ("CWT"). In 2010, the first year that all major age classes of returning adults had received 25 percent CFM, the data showed that the vast majority of returning spawners on the Mokelumne and Merced Rivers were hatchery fish. (DFG PowerPoint, p. 3). This result is not surprising, given that the Mokelumne and Merced Rivers both have hatcheries. However, on the Stanislaus and Tuolumne Rivers, neither of which has a hatchery, the proportion of hatchery and natural returners was evenly split. (Id.). These data[5] unequivocally demonstrate that the San Joaquin River Basin population of fall-run Chinook salmon is dominated by hatchery fish.[6]

Given that increased flows will not prefer natural fish over hatchery fish, any increased flow regime imposed by the SWRCB will not do much to increase the production of natural fish. Absent a change in the hatchery management protocols, hatchery fish will continue to dominate the San Joaquin River Basin regardless of the flows in the tributaries and at Vernalis, and little headway will be made toward the goal of doubling the natural production.

The Decision to Attempt to Implement the Doubling Goal Will Be Arbitrary and Capricious.

The fish doubling goal established in Fish and Game Code section 6902 is nothing more than a statement of policy and the SWRCB is not required to effectuate it. Similarly, the provisions of the CVPIA apply only to the agencies of the United States, and are in no way binding on the SWRCB. As

[5] The SJRGA does not believe that these data are accurate. The raw numbers were analyzed by its consultant, FISHBIO, which concluded that the proportion of returning hatchery fish in the San Joaquin River Basin approached 100 percent.

[6] Even this analysis is skewed by the agencies' treatment of the various returning fish. If two hatchery fish return to the Stanislaus River and spawn, their progeny are considered "natural." However, if the same two hatchery fish return to their natal stream and spawn at or near the hatchery, their progeny are considered "non-natural." Such arbitrary treatment and classification calls into question the veracity of any differentiation between "natural" and "hatchery" fish.

such, the decision to implement the doubling goal is a discretionary one, and must be based upon logic and evidence. In light of the fact that:

- the doubling goal applies statewide, and not to any particular stream or basin;
- it will be impossible to double the production of San Joaquin River Basin fish provided NMFS continues to manage the ocean harvest to prevent more than 180,000 spawners from returning;
- the small overall contribution of the San Joaquin River Basin to anadromous fish generally;
- the lack of any spring-run or winter-run Chinook salmon in the San Joaquin River Basin;
- no facts indicate that the water and dollar costs of attempting to double fish in the San Joaquin River Basin are significantly less than those necessary to attempt to double fish in the Sacramento River Basin; and
- hatchery fish dominate the San Joaquin River Basin, including the Stanislaus and Tuolumne Rivers where no hatchery is present,

any effort by the SWRCB to attempt to double fish in the San Joaquin River Basin will be contrary to both logic and evidence, not to mention extremely unfair and prejudicial to the SJRGA and its members. The SJRGA urges the SWRCB to conduct additional workshops to determine its ability, and the wisdom of attempting, to double salmon in the San Joaquin River Basin. At a minimum, such effort should not begin unless and until the protocols affecting hatchery production and ocean harvest are made part of, and indeed subject to, the overall effort to double the natural production of anadromous fish. Changing the flow-dependent objectives of the San Joaquin River and its tributaries will not change hatchery policies or ocean harvest protocols.

Very truly yours,
O'LAUGHLIN & PARIS LLP

TIM O'LAUGHLIN

TO/tb
cc: San Joaquin River Group Authority
David Guy
Thad Bettner
Byron Buck